

Appl. No.: 10/674,956

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Amdt. Dated February 21, 2007

Response to Office Action Mailed November 21, 2006

REMARKS:

Applicant appreciates the time and care the examiner has taken in examining the application. Applicant requests reconsideration of the objection to and rejection of the claims, and states the following in support.

Independent claims 1 and 2 have been amended to obviate the objection to the claims.

As to the claim rejections, independent claims 1 and 2 herein provide for use of a transmission surface formed non-parallel to the input direction or output direction of the optical wave guide, and formed apart from the optical wave guide. The optical fiber is connected to the transmission surface. Because of the claimed configuration, the angle formed between the input direction of the optical wave guide and the output direction of the optical fiber can be set at approximately 90° (as in Claim 1); and the angle formed between the output direction of the optical wave guide and the input direction of the optical fiber can be set approximately 90° (as in Claim 2). Also, the propagation distance of light waves that propagate inside the substrate excluding the optical wave guide can be 200µm or less.

As a result, downsizing of the entire device, including the optical wave guide element, can be achieved, while limiting the coupling loss to be 3dB or less, as shown in Table 1 of the description in this application.

In contrast, Japanese Patent Application Publication No. 02-240607 ('607) does not disclose or suggest the use of a transmission surface as claimed in the present application. Specifically, as can be taken from Fig. 2 of '607, the bottom surface 18 of the substrate is in

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parallel with the optical wave guide 4, and the optical fiber 8 is not connected to the bottom surface 18. In addition, it is necessary to use the rod lens 12 in order to achieve the optical coupling.

Therefore, as explained above, the configuration of the present invention as claimed is totally different from that of '607 and the present invention is not rendered obvious thereby. It is respectfully submitted that the claim rejections under Section 103(a) should be reconsidered and withdrawn.

It is respectfully submitted that the application is in condition for prompt allowance and that all of the objections, rejections and requirements raised in the Office action have been met. Early, favorable treatment of this application is requested.

The examiner is encouraged to telephone the undersigned with any questions or comments so that efforts may be made to resolve any remaining issues.

The Commissioner is hereby authorized to charge any necessary fees, or credit any overpayment, associated with this communication, including fees for any necessary extension of time under 37 CFR §1.136(a) for filing this communication, which extension is hereby requested, to our Deposit Account No. 50-0305 of Chapman and Cutler LLP.

Respectfully submitted,

By: 

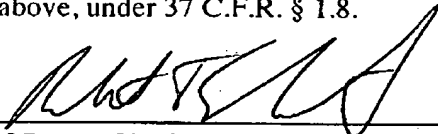
Robert J. Schneider, Reg. No. 27,383

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I hereby certify that the attached correspondence, namely: Response to Office Action, was transmitted by facsimile on the date listed above, to the U.S. Patent Office at the facsimile number listed above, under 37 C.F.R. § 1.8.

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